

Features

- . High Signal -to Noise Ratio
- . High Slew
- . Low Distortion
- . Large Output Voltage Swing
- . Wide Temperature Range
- . Low Power Consumption
- . Excellent Power Supply Ripple Rejection
- . Short -circuit Elimination

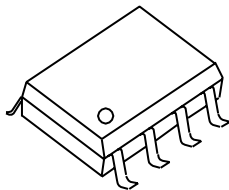
Applications

- .Portable Digital Audio

General Description

The A2308D integrated circuit is a high gain, high output current, high output voltage swing dual operation amplifier. The device is fabricated in a CMOS process and has been primarily developed for portable digital audio applications.

Package Outline



CM9308

Ordering Information

Tape & Reel package. One Reel 2,500 pcs.

Tube package. One Tube 100 pcs.

Absolute Maximum Ratings

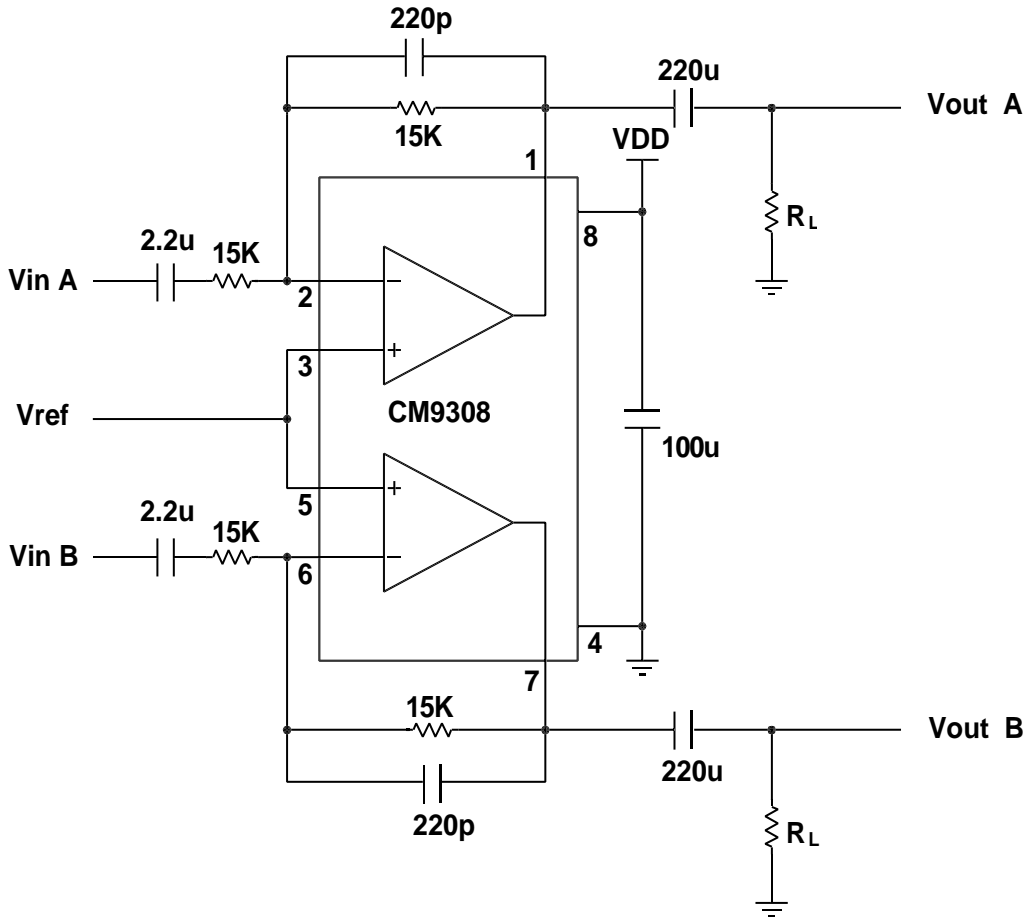
Symbol	Parameter	Rating	Unit
V_{DD}	Supply Voltage	7	V
T_A	Operating Ambient Temperature range	-40 to 85	°C
T_J	Maximum Junction Temperature	150	°C
T_{STG}	Storage Temperature Range	-65 to +150	°C
T_S	Soldering Temperature,10 seconds	300	°C

Electrical Characteristics

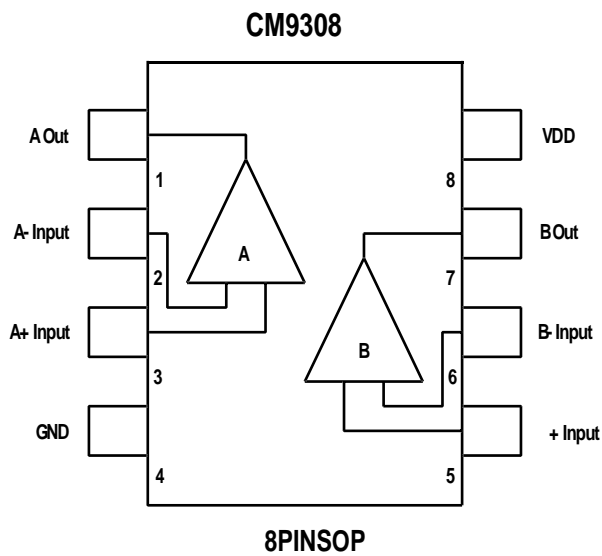
$V_{DD}=5V$, $V_{SS}=0V$, $T_A=25°C$, $f_i=1kHz$, $R_L=32$ (unless otherwise noted)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_{DD}	Supply Voltage					V
	Single		3.0	5.0	7.0	
	Dual		1.5	2.5	3.5	
V_{SS}	Negative Supply Voltage		-1.5	-2.5	-3.5	V
I_{DD}	Supply Current	No Load		5.5	8	mA
P_{TOT}	Total Power Dissipation	No Load		15.0	25	mW
DC Characteristics						
$V_{I(OS)}$	Input Offset Voltage			10		mV
I_{BIAS}	Input Bias Current			10		pA
V_{CM}	Common Mode Voltage		0		3.5	V
G_V	Open-loop Voltage Gain	$R_L=5k$		70		dB
I_O	Max. Output Current	$(THD+N)/S < 0.1\%$	55	60		mA
R_O	Output Resistance			0.25		
V_O	Output Voltage Swing	$R_L=32$	0.75		4.25	V
		$R_L=16$	1.5		3.5	
PSRR	Power Supply Rejection Ratio	$f_i=100Hz$ $V_{RIPPLE(P-P)}=100mV$		90		dB
G_{CS}	Channel Separation	$R_L=32$		90		dB
C_L	Load Capacitance				1000	pF
AC Characteristics						
(THD+N)/S	Total Harmonic Distortion plus Noise to Signal Ratio	$R_L=32$		-70	-65	dB
				0.03	0.06	%
S/N	Signal to Noise Ratio		100	110		dB
U_G	Unity Gain Frequency	Open-loop, $R_L=5k$		3		MHz
P_O	Max. Output Power	$(THD+N)/S < 0.1\%$		60		mW
C_i	Input Capacitance			3		pF
SR	Slew Rate	Unity Gain Inverting		5		V/ μs
B	Power Bandwidth	Unity Gain Inverting		20		kHz

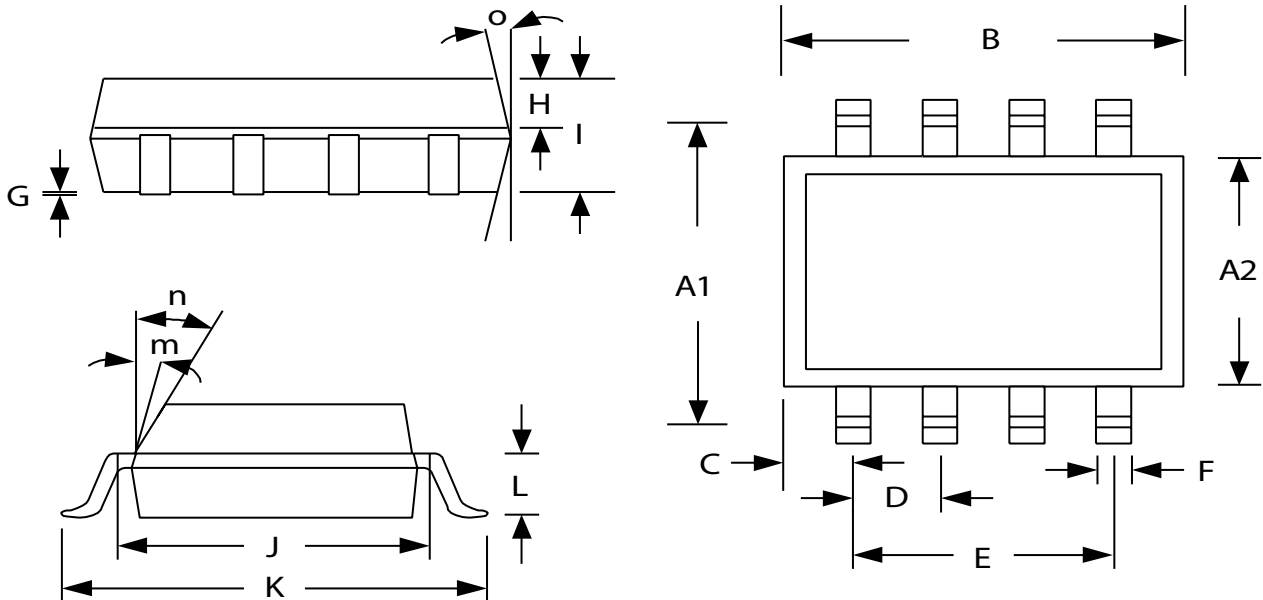
Application Circuit



Block Diagram



Packaging Information



DIM	M i l l i m e t e r s		I n c h e s	
	M n.	M a x.	M n.	M a x.
A1	4.80	5.00	0.190	0.200
A2	3.80	4.00	0.149	0.157
B	4.80	5.00	0.189	0.196
C	0.558		0.022	
D	1.2BSC		0.050BSC	
E	3.810		0.150	
F	0.33	0.51	0.013	0.069
G	0.152	0.202	0.006	0.008
H	0.406		0.016	
I	1.35	1.75	0.053	0.069
J	4.496	4.623	0.177	0.182
K	5.994	6.197	0.236	0.244
L	0.939		0.037	
m	7°		7°	
n	45°		45°	
o	8°		8°	